Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of quantizing image data to improve perceived image quality comprising the steps of:

(a) transforming an image datum to a datum transform coefficient;
(b) measuring a distortion of an image;
(c) as a function of said distortion of said image, varying a range of a plurality of transform coefficients included between a lower frequency limit and a higher frequency limit of a quantization step;
(d) identifying a quantization step comprising a range of transform coefficients inclusive of said datum transform coefficient; ~~and~~
(e) substituting for said datum transform coefficient a quantizer index representing said transform coefficients of said range included in ~~said quantizer step~~ the identified quantization step; and
(f) increasing the lossiness of compression at higher frequencies relative to the lossiness at lower frequencies by varying said range of transform coefficients as a function of said distortion of said image data comprising ~~comprises~~ the step of ~~decreasing~~ increasing said range included in a quantization step comprising ~~lower~~ higher frequency transform coefficients relative to a range included in a second quantization step comprising ~~higher~~ lower frequency transform coefficients.

2. (Currently Amended) The method of claim 1 wherein the step of varying said range of transform coefficients as a function of a distortion of said image data comprises the step of ~~decreasing~~ increasing said range included in a first quantization step comprising ~~lower~~ higher frequency transform coefficients relative to a range included in a second quantization

step comprising ~~higher~~ lower frequency transform coefficients as said distortion of said image increases.

3. (Currently Amended) The method of claim 1 wherein the step of varying said range of transform coefficients as a function of a distortion of said image data comprises the step of ~~decreasing~~ increasing said range included in a first quantization step comprising ~~lower~~ higher frequency transform coefficients relative to a range included in a second quantization step comprising ~~higher~~ lower frequency transform coefficients if said distortion of said image exceeds a threshold distortion.

4. (Currently Amended) The method of claim 1 wherein the step of varying said range of transform coefficients as a function of a distortion of said image data comprises the step of ~~decreasing~~ increasing said range included in ~~said~~ a first quantization step comprising ~~lower~~ higher frequency transform coefficients relative to a range included in said second quantization step comprising ~~higher~~ lower frequency transform coefficients if a peak-to-mean amplitude of said distortion at least equals a frequency detection threshold of a basis function.

5. (Currently Amended) The method of claim 1 wherein the step of varying said range of transform coefficients as a function of a distortion of said image data comprises the step of ~~decreasing~~ increasing said range included in a first quantization step comprising ~~lower~~ higher frequency transform coefficients relative to a range included in a second quantization step comprising ~~higher~~ lower frequency transform coefficients as a data rate decreases.

6. (Currently Amended) The method of claim 1 wherein the step of varying said range of transform coefficients as a function of a distortion of said image data comprises the step of ~~decreasing~~ increasing said range included in a first quantization step comprising ~~lower~~ higher frequency transform coefficients relative to a range included in a second quantization step comprising ~~higher~~ lower frequency transform coefficients if a decrease in a data rate exceeds a threshold decrease.

7. (Canceled).

8. (Canceled).

9. (Currently Amended). A method of quantizing image data comprising the steps of:
   - (a) transforming an image datum to a datum transform coefficient;
   - (b) measuring a distortion of an image;
   - (c) as a function of said distortion of said image, varying a range of a plurality of transform coefficients included between a lower frequency limit and a higher frequency limit of a quantization step;
   - (d) identifying a quantization step comprising a range of transform coefficients inclusive of said datum transform coefficient;
   - (e) substituting for said datum transform coefficient a quantizer index representing said transform coefficients of said range included in ~~said quantizer step~~ the identified quantization step;
   - (f) wherein the step of varying said range of transform coefficients as a function of a distortion of said image data comprises the step of decreasing said range included in a quantizer step comprising lower frequency transform coefficients relative to a range included in a second quantizer step comprising higher frequency transform coefficients if a peak-to-mean amplitude of said distortion at least equals a frequency detection threshold of a basis function.

10. (Previously Presented). The method of claim 9 wherein the step of varying said range of transform coefficients as a function of a distortion of said image data comprises the step of decreasing said range included in a first quantization step comprising lower frequency transform coefficients relative to a range included in a second quantization step comprising higher frequency transform coefficients as said distortion of said image increases.

11. (Previously Presented). The method of claim 9 wherein the step of varying said range of transform coefficients as a function of a distortion of said image data comprises the step of decreasing said range included in a quantization step comprising lower frequency transform coefficients relative to a range included in a second quantization step comprising higher frequency transform coefficients if said distortion of said image exceeds a threshold distortion.

12. (Previously Presented). The method of claim 9 wherein the step of varying said range of transform coefficients as a function of a distortion of said image data comprises the step of decreasing said range included in a first quantization step comprising lower frequency transform coefficients relative to a range included in a second quantization step comprising higher frequency transform coefficients as a data rate decreases.

13. (Previously Presented). The method of claim 9 wherein the step of varying said range of transform coefficients as a function of a distortion of said image data comprises the step of decreasing said range included in a first quantization step comprising lower frequency transform coefficients relative to a range included in a second quantization step comprising higher frequency transform coefficients a decrease in a data rate exceeds a threshold decrease.